THE MANUFACTURING EXTENSION PARTNERSHIP

Delivering Measurable Returns to Its Clients

Fiscal Year 2003 Results

FEBRUARY 2005

NIST
National Institute of Standards and Technology
Technology Administration, U.S. Department of Commerce

EXECUTIVE SUMMARY

Created in 1988, the Manufacturing Extension Partnership (MEP) program seeks to improve the productivity, economic competitiveness and technological capabilities of America's manufacturers, particularly small manufacturers. MEP is a results-based network of locally operated, staffed and controlled non-profit and university-based organizations leveraging federal, state and local, and private resources. This partnership among the federal government, state and local governments, and the private sector has manufacturing extension offices providing services in every state across the country and in Puerto Rico. These centers provide critical services and assistance to meet clients' strategic needs now and into the future. MEP delivers its services on the shop floor of manufacturing firms. Each center works directly with local firms to provide expertise and services tailored to their most critical needs.

Since 1996, NIST MEP has sponsored a national survey of center clients by an independent third party. The survey asks clients to comment on the business impact of the services provided by their local center. The survey results allow the MEP to gauge the impact of the national MEP network on America's manufacturers and its impact on the national and regional economies. Clients are surveyed one year after the initial project is completed and submitted for survey.

Each year MEP helps thousands of companies solve problems, increase productivity, achieve higher profits, and create and retain thousands of jobs. This paper documents the survey process and summarizes the total national client impacts for the services provided in Fiscal Year 2003. Since the survey is conducted one year after the completion of services, it was conducted during Fiscal Year 2004. The MEP clients reported that the services led to:

- Improving productivity among more than three quarters of MEP clients
- Creation and retention of 50,315 jobs
- Helping firms increase and retain sales by over $4.1 billion
- Leveraging over $912 million in new private sector investment
- Savings of more than $686 million in costs

The clients also reported that:

- 93% were either satisfied or very satisfied with the quality of services received
- 82% were more competitive as a result of services
- 74% of clients improved employee skills
- 70% improved their customer satisfaction
- 85% took actions more quickly with assistance of its local center
- 74% took improvement actions at a lower cost

These survey results demonstrate that MEP delivers measurable returns to its clients and investors. As a result of MEP services, clients are modernizing, investing in their people, saving money and becoming more productive and competitive.

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I. INTRODUCTION

A. The Manufacturing Extension Partnership

Created in 1988, the Manufacturing Extension Partnership (MEP), a program of the U.S. Department of Commerce's National Institute of Standards and Technology (NIST), seeks to improve the productivity, economic competitiveness and technological capabilities of America's manufacturers, particularly small manufacturers. MEP is a results-based network of locally operated, staffed and controlled non-profit and university-based organizations leveraging federal, state and local, and private resources. These centers provide critical services and assistance to meet clients' strategic needs now and into the future.

This partnership among the federal government, state and local governments, and the private sector has manufacturing extension offices providing services in every state across the country and in Puerto Rico. MEP delivers its services on the shop floor of manufacturing firms. Each center works directly with local firms to provide expertise and services tailored to their most critical needs, ranging from process improvements and employee training to adopting new business practices and the application of information technology in their companies. MEP services are provided through a combination of direct assistance from center staff and assistance from outside consultants.

MEP is evolving. Driven by customer and market demands, MEP constantly refines and improves its products, services and service-delivery approaches. Just like the manufacturers we work with, the MEP program has transformed because of the changing manufacturing marketplace. MEP's work with its clients focuses on technology, training, and technical assistance.

Since the program began, clients have used the NIST MEP program more than 293,000 times. In Fiscal Year 2003, MEP centers assisted 18,422 clients in areas including business systems, human resource management, process improvement, product development and market development.

B. Small Manufacturers and Their Challenges

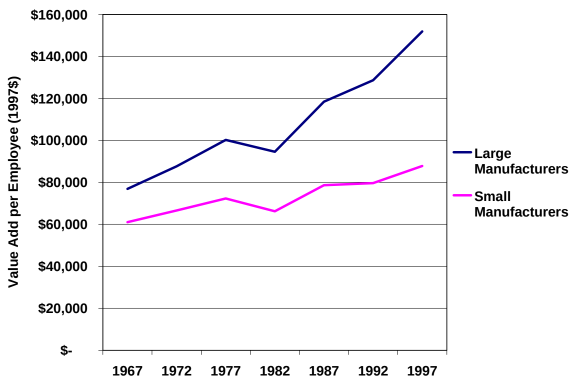
MEP's primary clients, the 350,000 U.S. small manufacturing establishments (with fewer than 500 employees) are important cornerstones of the U.S. economy and contribute mightily to national and economic security.[1] Diversity, geographic dispersion and complexity characterize the small manufacturing marketplace. Small manufacturers represent a critical national economic resource: they represent 98 percent of all manufacturing establishments, account for two-thirds of all manufacturing employment and employ 11 million people, and account for over half of the total value-added by all U.S. manufacturers.

Critical as they are to the national economy, smaller manufacturers are less likely than larger firms to understand and implement new technology, adopt modern manufacturing processes, and deploy improved business practices. Lacking the information networks and resources available to large firms, the productivity gap between small and large manufacturers widens as highlighted in Figure 1.

[1] For additional information, see National Association of Manufacturers and The Manufacturing Institute, Today's Small and Medium Manufacturers: Powerful, Flexible and the Lifeblood of Their Communities. 2001.

Figure 1

The Productivity Gap Between Small and Large Manufacturing Establishments is Growing, 1967-1997



Source: Census of Manufacturers, U.S. Census Bureau

The relationship between large and small firms is becoming more complementary and cooperative rather than competitive. As large firms increase their dependence on suppliers for parts and services, the performance and capabilities of small manufacturers is even more important to the competitiveness of all manufacturers and to the health of the U.S. economy. Further, large manufacturers are requiring small firms to meet increasingly rigorous quality standards. Failure to comply can prevent small firms from participating in these important product markets.

II. THE SURVEY PROCESS

A. Survey Purpose

Since 1996, NIST MEP has sponsored a national survey of center clients by an independent third party. The survey asks clients to comment on the business impact of the services provided by their local center. NIST MEP surveys center clients for two primary purposes:

- To collect aggregate information on program performance to report to various stakeholders as indicators of program performance. The survey provides information about the quantifiable impact on client firms of the services provided by MEP centers. NIST MEP also conducts other studies to evaluate the system's impact that corroborate and complement the survey results.
- To provide center-specific program performance and impact information for center use. Centers use this information to communicate results to their own stakeholders, at both the state and federal level. Center management and NIST MEP use these results to evaluate center performance and effectiveness. The MEP Center Review Criteria and review process place a strong emphasis on a center's ability to demonstrate impacts and uses the survey results in its program reviews.

The survey results also provide MEP centers with a tool to measure their center's performance and effectiveness and benchmark their performance against other centers and performance standards. In addition, the data allow NIST MEP to gauge the impact of the national MEP network on America's manufacturers and its impact on the national and regional economies.

B. Survey Methods

Synovate Inc., a subsidiary of Aegis Group PLC, a leading U.S.-based full service global market research company, conducts the survey for MEP. Founded in 1946, Synovate is one of the top ten global custom marketing research companies. With substantial survey experience, global presence and over 3,000 employees, they bring the most modern survey-related technology to the project. Synovate provides services to many companies and its clients include General Motors, Fidelity Investments, American Express, ExxonMobil, Proctor & Gamble, State Farm Insurance, Bristol-Meyers Squibb, Kaiser Permanente and AT&T.

Synovate surveys MEP clients four times each year. The survey asks MEP clients to consider the entire set of projects or services provided by a center over the last three years and to comment on how their firm's performance and processes have been affected in the last 12 months. The survey asks clients to comment on the impact of MEP services in the following areas:

- Client satisfaction with the services provided
- Bottom-line client outcomes and impacts such as productivity increases, sales, technology, capital

investment and cost savings; and intermediate outcomes in areas such as internal operations and processes, sales and marketing, human resources, information and management systems.

The survey has 21 questions and takes, on average, 10-12 minutes to complete. A copy of the survey form and the questions is included in Appendix 3.

Clients are selected for the survey based on when the firm completed its first project with a center and are surveyed approximately 12 months later. For instance, if a client's project closed on March 15, 2003, this client would have been surveyed in the first quarter of 2004. Clients completing multiple projects with a center in a year are surveyed only once a year. While clients are selected based on when a project was completed with a center, the survey is client-based rather than project-based.

MEP and Synovate use several tools and techniques to minimize both response and non-response bias to the survey. Response bias may arise because of inaccurate responses to particular questions and non-response bias may arise due to errors reflecting an unrepresentative sample of MEP clients actually being interviewed because some clients refuse to participate or cannot be reached during the four week survey period.

Several steps are taken to limit response bias. This includes informing the clients that they were selected for an interview and encouraging their participation in the study. A letter is sent to each client announcing that they have been selected for the survey and that Synovate will be contacting them shortly to ask them about their experience and the outcomes of their work with a center. The MEP centers also follow up with non-respondents during the survey period to encourage their participation. In addition, interview procedures include many "call attempts" to reach a client to complete an interview, calling at different times and on different days, and setting an appointment with clients who request it.

Additional steps are taken to limit non-response bias. All interviewers use the same survey instruments and have written references for questions that may arise in the course of an interview. The survey uses Computer Assisted Telephone Interviewing (CATI) procedures that include scripting how each question is asked to ensure comparability from interviewer to interviewer and from MEP customer to MEP customer.

Interviewer training is conducted before each survey to review the procedures, questions, terms, definitions and the purpose and goals of the study. MEP and Synovate staff perform regular monitoring of the interviews. In addition to completing the survey through a phone interview, clients have the option of completing the survey via the World-Wide Web (WWW) or through an Interactive Voice Response (IVR) system, both of which exactly follow the CATI telephone script. For the surveys conducted in FY 2004, CATI interviews represented 49.6 percent of the completed surveys, 47.5 percent were completed via the WWW and 2.9 percent were completed using the IVR option. There is also a capability to conduct CATI surveys in Spanish at the client's request.

Table 1 shows the number of interviews conducted in each survey period, the number that completed an interview, and the response rate.[2]

Table 1

Distribution of Interviews by Survey Period and Response Rates

Survey Period	Number of Clients Attempted	Number of Completed Interviews	Survey Response Rate
Jan. 17 – Feb. 14, 2004	1,365	1,156	84.7%
April 17 – May 14, 2004	1,371	1,181	86.1%
July 17, – Aug. 14, 2004	1,555	1,330	85.5%
Oct. 17 – Nov. 14, 2004	1,357	1,198	88.3%
Total	**5,648**	**4,865**	**86.1%**

[2] Appendix 1 compares the characteristics of the clients that responded to the survey and those that did not to explore if there are indications of potential response bias. Appendix 2 examines the confidence intervals for the survey results. Appendix 3 provides a copy of the actual survey instrument and the results for each question based on the client responses.

III. CLIENT IMPACT SURVEY RESULTS

A. Bottom - Line MEP Client Impact Results

The program delivers measurable returns to its clients. The services provided make a positive contribution to improvements in client productivity, competitiveness, and their bottom line. Table 2 provides additional detail on productivity and competitiveness improvements reported by MEP clients. Tables 3 through 6 provide more detail on the bottom-line impacts reported by the 4,865 MEP clients interviewed.

After receiving services:

- **MEP clients improved their productivity and increased their economic competitiveness.** Over 75 percent of clients responding to the survey reported a productivity improvement and over 82 percent of the respondents said their company was more competitive because of the services they received in FY 2003. Of the clients responding to the survey, nearly 70 percent said that satisfaction among their customers was higher than it would have been. More than 56 percent improved their profit margin, over 51 percent increased their revenue or cash flow, and 40 percent increased their market share. Nearly half of the clients said that their sales per employee were higher than they would have been without the MEP services *(See Table 2)*.

Table 2

Competitiveness Improvements Reported by MEP Clients *(n=4,865 clients)*

Measure	Percent of Clients Reporting
Increased Productivity	75.5%
Increased Competitiveness	82.4%
Improved Customer Satisfaction	69.5%
Improved Profit Margin	56.1%
Increased Revenue or Cash Flow	51.1%
Increased Market Share	40.0%
Higher Sales per Employee	49.9%

- **MEP services had a significant impact on company sales.** As a result of the services provided to MEP clients, more than half (57.1 percent) of all clients responding to the survey reported that their company experienced a sales impact by either increasing their sales or retaining sales that otherwise would have been lost. Almost 40 percent reported that their company gained new sales revenue and well over half of the clients responded that they were able to retain sales that otherwise would have been lost. In total, these companies reported that MEP services resulted in over $4.1 billion in sales impact. MEP services generated nearly $1.5 billion in increased sales and MEP services helped clients retain over $2.6 billion in sales during FY 2003 *(See Table 3)*.

Table 3

Sales Impacts Reported by MEP Clients
(n=4,865 clients)

Sales Impact	Percent of Clients Reporting	Total Impacts Reported
Increased Sales	39.7%	$1.48 billion
Retained Sales	54.2%	$2.64 billion

- **MEP helped its clients create and retain jobs.** MEP services led more than half (52.4 percent) of the clients surveyed for services they received in FY 2003 to create new jobs or retain jobs that would have otherwise been lost. More than 45 percent of the clients reported that these services helped them retain jobs that would have been lost if not for the services and more than one out of three clients reported that the services led them to create new jobs. MEP clients created and retained 50,315 jobs *(See Table 4)*.

Table 4

Employment Impacts Reported by MEP Clients *(n=4,865 clients)*

Employment Impact	Percent of Clients Reporting	Total Impacts Reported
Creation of New Jobs	33.8%	14,882 jobs
Retention of Jobs	45.7%	35,433 jobs

- **MEP Clients' reported significant cost savings.** 73.9 percent of MEP clients surveyed said that the services helped them save money in areas such as labor, materials, inventory, energy and investments or by helping them avoid unnecessary investments. MEP clients realized more than $686 million in total cost savings in FY 2003 *(See Table 5)*.

Table 5

Cost Savings Impacts Reported by MEP Clients *(n=4,865 clients)*

Cost Savings Impact	Percent of Clients Reporting	Total Impacts Reported
Labor, material, overhead, inventory, energy, etc.	68.9%	$452.3 million
Cost Savings on Investments Made or Avoided	42.4%	$234.1 million

- **MEP services leveraged new client investment.** 76.6 percent of the clients reported that they increased investment in some key area of their operations. MEP services leveraged significant new investments among its clients totaling over $912 million. The bulk of new investments reported by clients were in traditional plant and equipment; but an increasing share of the new investment reported by clients was in more intangible areas such as employee skills, information systems, and research and development. New investments of over $658 million were made in plant and equipment, over $67 million of new investment in information systems and software, and over $97 million in workforce training and workforce practices. More than $88 million in new investments were made in other areas including research and development *(See Table 6)*.

Table 6

Investment Impacts Reported by MEP Clients *(n=4,865 clients)*

New Investment Impact	Percent of Clients Reporting	Total Impacts Reported
Plant and Equipment	42.2%	$658.6 million
Information systems and software	28.7%	$67.7 million
Workforce practices and employee skills	61.1%	$97.3 million
Other areas of business	15.0%	$88.7 million

B. Intermediate Client Impacts

The results below focus on the intermediate outcomes reported by MEP clients. The program is helping firms increase their agility, saving them time and money, and contributing to important improvements in product quality, workplace practices, information systems and increasing the efficiency and effectiveness of internal operations. These improvements are also key ingredients in boosting productivity growth.

- **Almost all clients reported important business performance improvements.** Over 92 percent of the clients responding to the survey reported that one or more key business performance metrics improved as a result of the services provided to them including improvements in areas such as profitability, productivity, sales, cost savings, investment, or jobs.
- **Most clients say the services led them to take improvement actions that they would not have taken and they took action more quickly.** Nearly 78 percent of the clients surveyed reported that the services led them to take actions that they would not otherwise have taken. Nearly 85 percent of the clients responding said that they took actions more quickly as a result of the projects completed. Moreover, nearly three quarters (74.2 percent) of the clients reported that they took actions at a lower cost.

- **MEP clients reported important improvements in manufacturing systems.** Product quality and time to market represent key competitive edges for many manufacturers. More than half of the clients reported that the services improved product quality and over 53 percent reduced lead-time. Additionally, nearly half reduced their work in process inventory and over 45 percent increased their inventory turns.

- **MEP clients are increasing their understanding of their market and have better sales opportunities.** Knowledge of the marketplace is essential in any company's sales numbers. Over 55 percent of the clients reported they have improved their customer development or retention as a result of the MEP services. Nearly half of the clients said they have a greater understanding of their customers, markets, or competitors. Nearly 40 percent were able to enter new or better markets.

- **MEP clients report important improvements in human capital and workplace practices.** Improving employee skills and adopting new workplace practices are important contributors to productivity growth. Nearly 74 percent of the clients reported that employee skills improved because of the services provided and almost 69 percent of the clients said that the work environment for employees improved. Nearly one out of three of the clients responding reported that MEP services helped them reduce employee turnover.

- **MEP is helping its clients better manage and use their information systems.** Investing in and improving how information technology is applied is increasingly important in many industries and to many firms. Over 31 percent of the clients responding to the survey reported that the services helped them better integrate their information systems with either customers or suppliers. Almost 30 percent of those surveyed reported that their use or selection of information systems or technology improved as result of MEP services and over 20 percent improved their e-commerce capabilities.

- **MEP clients report that MEP services have improved their management systems.** Improving management systems, such as better planning and improved understanding of cost-drivers, is important to firm performance. Over 61 percent of the clients reported improvements in their business and strategic planning. Additionally, 28 percent achieved quality certifications while more than one in five improved their environmental management systems.

- **MEP clients are very satisfied with the services provided and they would use these services again.** More than 93 percent of the clients were very satisfied or satisfied with the quality of services they received from MEP and more than 89 percent definitely or probably would use MEP services again in the future.

IV. CONCLUSION

MEP focuses on results and outcomes. It maintains its accountability to its clients and investors by asking the people with the best information - its clients - about the impacts of its work.

✓ MEP delivers measurable returns to its clients and its investors. Each year, MEP helps thousands of companies solve problems, increase productivity, achieve higher profits, and create and retain thousands of jobs. In FY 2003, MEP clients reported that these services led to:

- Improving productivity among more than three-quarters (75.5 percent) of MEP clients
- Creating and retaining 50,315 jobs
- Increasing and retaining sales of over $4.1 billion
- Modernizing their small businesses by leveraging over $912 million in new private sector investments
- Saving more than $686 million in costs
- Increased competitiveness for more than 82% of the respondents

✓ Other studies demonstrate that MEP services contribute to improving the performance of its clients by increasing their competitiveness, boosting their productivity, generating bottom line benefits and producing a positive return on the public investment.[3]

- The Center for Economic Studies at the U.S. Census Bureau found that average MEP clients achieved an average of 5.2% higher productivity growth between 1996 and 1997 than non-clients and experienced 4.7% faster employment growth over the same period.[4]

MEP generates a positive return on its investment. MEP client outcomes translate into broader economic effects as well.[5] Gross Domestic Product in 2000 was $7.6 billion higher than without the program, personal income was $4.8 billion higher than without the program and employment was 114,000 higher. MEP services increase corporate and personal tax revenues both by significantly growing before-tax profits of small manufacturers and by stabilizing or growing the manufacturing workforce. A 2004 study estimates the MEP program's return on investment of the Federal budget investment at more than a 6:1 return to the federal treasury.[6]

The results from these other studies of the program reinforce and complement these survey findings. The survey data and these other studies continue to show that the program has a positive impact on the companies it works with and makes a positive contribution to local, state, and the U.S. economy.

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[3] See, for instance, U.S. Census Bureau, Center for Economic Studies. *The Impact of MEP on Manufacturing Plant Performance.* Draft, June 2001; Ronald S. Jarmin. *Journal of Policy Analysis and Management.* "Evaluating the Impact of Manufacturing Extension on Productivity Growth". Volume 18, No.1 pp. 99-119, 1999; and Nexus Associates, *NIST MEP Program: Impact on the U.S. Economy in 2000.* November 2, 2001.

[4] U.S. Census Bureau, Center for Economic Studies. *The Impact of MEP on Mfg Plant Performance.* Draft, 1999.

[5] The discussion about the broader economic impacts and the estimates of the return to the federal treasury are drawn from the following study: Nexus Associates. *NIST MEP Program: Impact on the U.S. Economy in 2000.* November 2, 2001.

[6] NIST, Building and Fire Research Laboratory, Office of Applied Economics. *Estimate of National Economic Losses from the FY2004 MEP Budget Cuts.* May 5, 2004.

APPENDIX 1: Characteristics of Respondents and Non-respondents

The data in this report are from a representative cross-section of MEP clients. Those responding to the survey did not significantly differ from the larger population of all MEP clients that we tried to contact. Thus, the data reported are likely to be representative of the target population and represents a conservative and reasonable estimate of MEP program impacts. The data reported here represent actual responses from the clients reached and the data have not been weighted or missing data imputed.

Clients responding were more likely to have completed more projects, lasting about the same number of hours, and were smaller (as measured by employment) than non-respondents. The typical respondent completed 2.8 projects, representing 184 hours of substantive activity and had 183 employees. The typical non-respondent completed 2.4 projects, representing 175 hours of substantive activity and had 247 employees. Below is additional information regarding the characteristics and distribution of the survey respondents compared to non-respondents.

This appendix explores the characteristics of the population selected for survey and examines whether there were important differences among those that responded to the survey and those that did not respond to the survey. Overall, the characteristics of the respondents and non-respondents did differ but not significantly.

Appendix Table 1.1

Characteristics of Survey Respondents & Non-Respondents in Terms of Establishment Size Category

Employment Size Category	Survey Respondents *(n=4,865)*	Survey Non-respondents *(n=783)*	Total Population *(n=5,648)*
1-19 employees	22.2%	22.2%	22.2%
20-99 employees	36.7%	31.3%	36.0%
100-249 employees	22.2%	21.3%	22.1%
250-499 employees	11.6%	14.2%	12.0%
More than 500 employees	7.2%	11.0%	7.7%

As this table suggests, the portion of clients responding to the survey closely tracks the distribution of the total population. Smaller clients (i.e., those with less than 100 employees) were slightly more likely to respond to the survey as compared to larger clients (those with 100 or more employees).

Appendix Table 1.2

Characteristics of Survey Respondents & Non-Respondents in Terms of Completed Projects

Number of Projects Completed	Survey Respondents *(n=4,865)*	Survey Non-respondents *(n=783)*	Total Population *(n=5,648)*
1 Project	41.0%	52.7%	42.6%
2 Projects	20.7%	15.7%	20.0%
3 or more Projects	38.3%	31.5%	37.4%

There appears to be a positive relationship between the number of projects completed with a client and the probability of responding to the survey. This table suggests that clients that had only one project with a center were less likely to respond to the survey and those with two or more projects were more likely to respond to the survey.

Appendix Table 1.3

Characteristics of Survey Respondents & Non-Respondents in Terms of Project Length

Project Length	Survey Respondents *(n=4,865)*	Survey Non-respondents *(n=783)*	Total Population *(n=5,648)*
1-16 hours	13.6%	22.2%	14.8%
17-40 hours	17.3%	19.0%	17.6%
41-80 hours	18.0%	16.2%	17.8%
81–120 hours	10.9%	9.8%	10.7%
More than 120 hours	40.1%	32.7%	39.0%

Paralleling the results above, there also appears to be a direct relationship between the overall length of all projects completed and the likelihood of responding to the survey. Clients with higher levels of involvement with center staff were much more likely to respond to the survey compared to those that had shorter periods of involvement with the center.

APPENDIX 2: Standard Error of the Estimates

Any sampling approach involves the possibility that the results reported could be different from the true characteristics of the full population from which the survey is drawn. While the survey is not a sample, not all clients respond to the survey so it is useful to present some information on the confidence intervals of our estimates. The likelihood that this is the case varies with two things: 1) the size of the sample, and 2) the observed distribution of the results in the sample. As far as the first is concerned, a sample size of 50 is generally regarded as the minimum necessary. As far as the latter is concerned, the closer to a 50-50 split that exists in the sample, the greater the likelihood that the sample result and the population result will diverge. Because of the large sample size, the confidence intervals around each reported result are very narrow.

To express the degree of confidence in the results relying on a sample, statisticians compute a “standard error of the estimate” and a “confidence interval” for the results. The confidence interval expresses the range on either side of an observed sample result that can be expected for the true value of the population to fall. The greater the degree of confidence wanted, the wider the confidence interval will be. Statisticians generally use a 95 percent confidence interval. This means that we are 95 percent confident that the true population proportion is in the specified range of the proportion reported based on the sample size.

The table below reports the confidence intervals for the full sample. This table provides the estimates of the standard errors at the 95 percent confidence level. Overall, we are 95 percent confident that the true population proportion ranges between ± 0.3 percent to ± 1.4 percent of the observed proportion. This means, for example, that if 60 percent of the respondents reported that the services helped them achieve some cost savings, there is a 95 percent certainty that the true value in the entire population of MEP clients falls between 58.6 percent and 61.4 percent.

Appendix Table 2.1

Standard Errors of Estimates for Given Survey Results, 95-Percent Confidence Level, Sample Size of 4,865 Respondents

Reported Result (Percent)	Confidence Interval
1	± 0.3
10	± 0.8
20	± 1.1
30	± 1.3
40	± 1.4
50	± 1.4
60	± 1.4
70	± 1.3
80	± 1.1
90	± 0.8
99	± 0.3

APPENDIX 3: Client Impact Survey – FY 2003 National Results

(n=4,865 respondents)

1. Did the services you received lead you to:
   - Take actions that you would otherwise not have taken?
     Yes – 77.9%
     No – 22.1%
   - Take actions more quickly?
     Yes – 84.6%
     No – 15.4%
   - Take actions at lower cost?
     Yes – 74.2%
     No – 25.8%

2. As a direct result of services you received, has your establishment experienced any of the following changes over the past 12 months in these areas of manufacturing systems?
   - Reduced lead time
     Yes – 53.2%
     No – 46.8%
   - Reduced work in process inventory
     Yes – 49.6%
     No – 50.4%
   - Reduced defect rate
     Yes – 51.6%
     No – 48.4%
   - Increased inventory turns
     Yes – 45.3%
     No – 54.7%

3. As a direct result of services you received, has your establishment experienced any of the following changes over the past 12 months in these areas of marketing and sales?
   - Improved understanding of customers, markets, or competitors
     Yes – 47.6%
     No – 52.4%
   - Improved customer development or retention
     Yes – 55.5%
     No – 44.5%
   - Entry into new or better markets
     Yes – 39.7%
     No – 60.3%

4. As a direct result of services you received, has your establishment experienced any of the following changes over the past 12 months in these areas of human resources?
   - Improved employee skills
     Yes – 73.8%
     No – 26.2%
   - Reduced employee turnover
     Yes – 32.7%
     No – 67.3%
   - Improved work environment for employees
     Yes – 68.7%
     No – 31.3%

5. As a direct result of services you received, has your establishment experienced any of the following changes over the past 12 months in these areas of information systems?
   - Achieved greater integration with the information systems of your customers or suppliers
     Yes – 31.3%
     No – 68.7%
   - Improved e-commerce capacity
     Yes – 20.8%
     No – 79.2%
   - Improved use or selection of information systems or software
     Yes – 29.8%
     No – 70.2%

6. As a direct result of services you received, has your establishment experienced any of the following changes over the past 12 months in these areas of management systems?
   - Improved environmental management systems (e.g., ISO 14000)
     Yes – 20.2%
     No – 79.8%
   - Achieved quality certification (e.g., QS 9000, ISO 9000)
     Yes – 28.0%
     No – 72.0%
   - Improved business or strategic planning
     Yes – 61.6%
     No – 38.4%

7. As a direct result of services you received, has your establishment experienced any of the following changes over the past 12 months in these areas of overall performance?

- Improved profit margin
  Yes – 56.1%
  No – 43.9%
- Increased revenue or cash flow
  Yes – 51.1%
  No – 48.9%
- Improved customer satisfaction
  Yes – 69.5%
  No – 30.5%
- Increased market share
  Yes – 40.0%
  No – 60.0%

8. Did the services you received directly lead to an increase in sales at your establishment over the past 12 months?

- Yes – 39.7% How much? $1,483,065,863
- No – 60.3%

9. Did the services you received directly lead you to create any jobs over the past 12 months?

- Yes – 33.8% How many? 14,882
- No – 66.2%

10. Did the services you received directly lead you to retain sales that would have otherwise been lost?

- Yes – 54.2% How much? $2,637,802,453
- No – 45.8%

11. Did the services you received lead you to retain any jobs over the past 12 months?

- Yes – 45.7% How many? 35,433
- No – 54.3%

12. Did the services you received directly result in cost savings in labor, materials, energy, overhead, or other areas over what would otherwise have been spent in the past 12 months?

- Yes – 68.9% How much? $452,293,878
- No – 31.1%

13. Over the past 12 months, were sales per employee higher than they would have been without services?

- Yes – 49.9%
- No – 50.1%

14. As a result of the services you received, has your establishment increased its investment over the past 12 months in:

- Plant or equipment?
  Yes – 42.2% How much? $658,621,265
  No – 57.8%
- Information systems or software?
  Yes – 28.7% How much? $67,687,847
  No – 71.3%
- Workforce practices or employee skills?
  Yes – 61.1% How much? $97,263,541
  No – 38.9%
- Other areas of business?
  Yes – 15.0% How much? $88,723,213
  No – 85.0%

15. As a result of the services you received, did your establishment avoid any unnecessary investments?

- Yes – 35.2% How much? $144,012,567
- No – 64.8%

16. As a result of the services you received, did your establishment save on any investments that were made?

- Yes – 24.8% How much? $90,124,942
- No – 75.2%

17. Is your establishment more competitive as a result of the services you received?

- Yes – 82.4%
- No – 17.6%

18. Did the services you received have any other effects on your establishment during the past 12 months?

- Yes – 55.6% Describe them.
  ____
  ____
  ____
  ____
- No – 44.4%

19. Are you satisfied with the quality of services you received?

– Very Satisfied	63.4%
– Satisfied	29.9%
– Neutral	5.6%
– Dissatisfied	0.8%
– Very Dissatisfied	0.4%

20. Would you use this program's services again in the future?

– Definitely Would	62.9%
– Probably Would	26.7%
– Not Sure	7.7%
– Probably Would Not	2.0%
– Definitely Would Not	0.6%

21. What are your two or three biggest business challenges?

– Foreign Competition	4.6%
– Worker Training	4.5%
– Hiring and Retaining Qualified Workers	3.8%
– Lean Manufacturing	3.2%
– Achieving/Maintaining Quality Standard	3.2%
– Productivity/Efficiency	2.7%
– Increase Market Share	2.6%
– Setup Cost Reduction	2.5%
– Increasing Sales	2.5%
– Materials Cost	2.2%
– Staying/Being Competitive	3.7%
– Cost Containment	2.1%
– Health Insurance Costs	1.7%
– Marketing	1.7%
– New Product Development	1.5%